

## ABSTRACT

The present invention provides a graphite electrode for an electric arc furnace used for steelmaking which can  
5 effectively suppress oxidation and consumption of the graphite electrode used for an electric steelmaking furnace during the operation and reduce the electrode consumption rate. The graphite electrode is used for an electric steelmaking furnace which is operated while cooling the graphite electrode which  
10 protrudes upward from the furnace roof by spraying a cooling liquid onto the surface of the graphite electrode, wherein an uneven surface structure is formed on the surface of the graphite electrode.